(No Model.)

W. ORR.

LOOM REED.

No. 536,699. Patented Apr. 2, 1895.

Fig. 1.

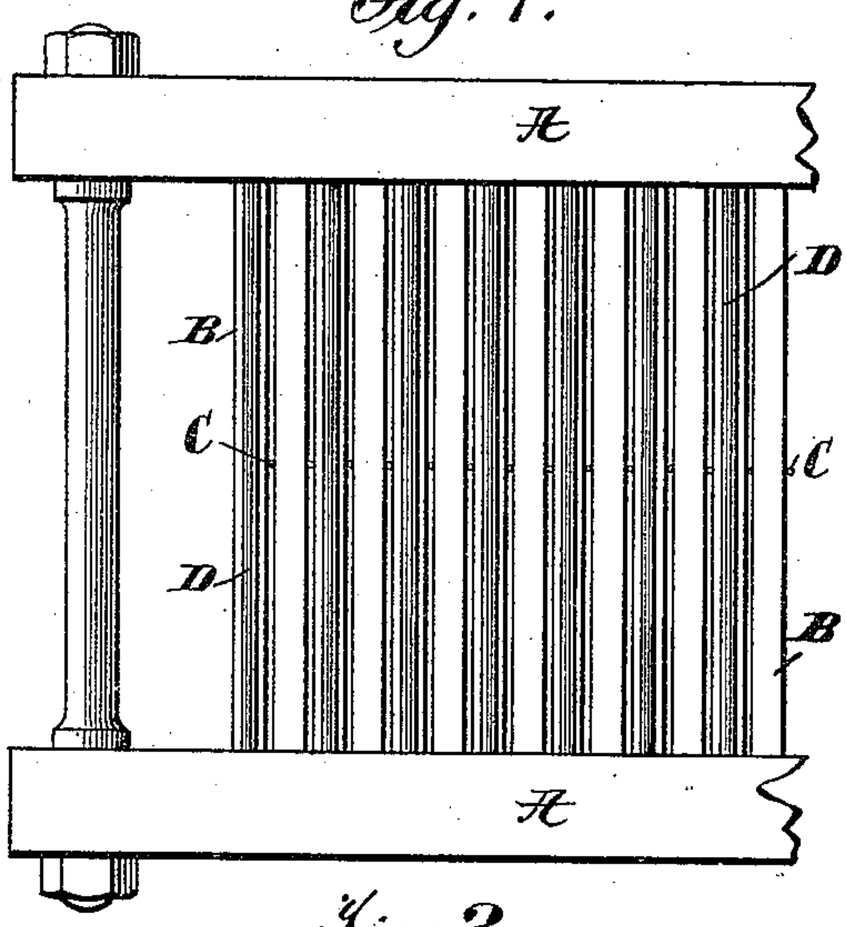


Fig. 2.

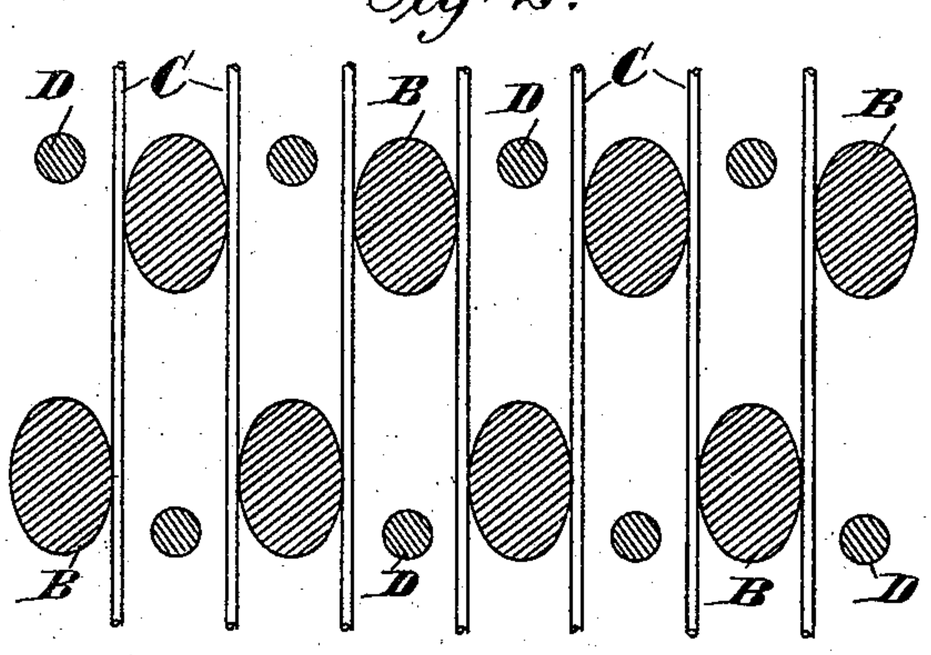
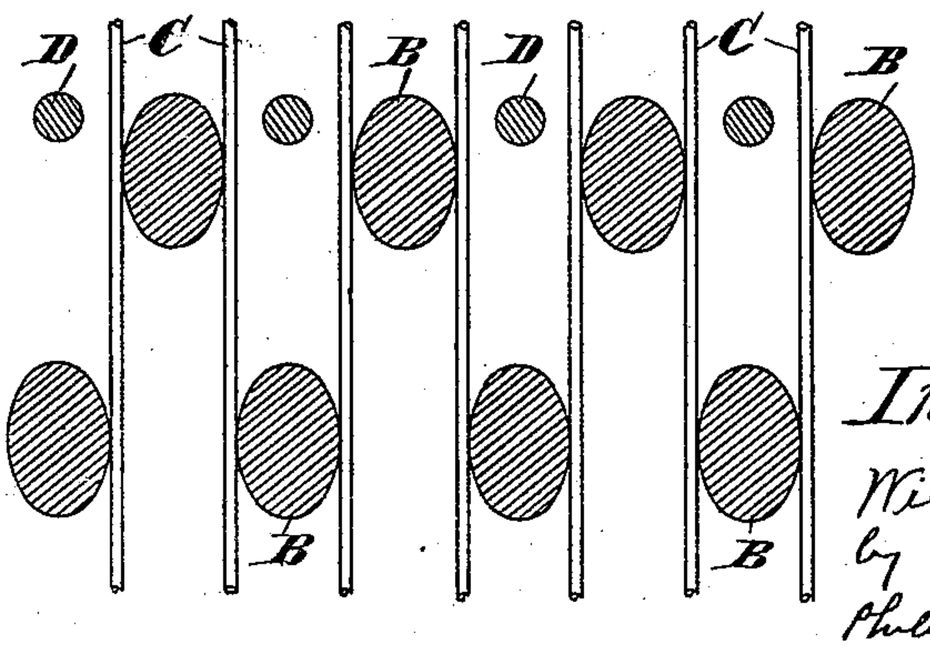


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM ORR, OF TRENTON, NEW JERSEY.

LOOM-REED.

SPECIFICATION forming part of Letters Patent No. 536,699, dated April 2, 1895.

Application filed October 8, 1894. Serial No. 525,220. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ORR, a citizen of the United States, residing at Trenton, county of Mercer, and State of New Jersey, have invented certain new and useful Improvements in Loom-Reeds, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates especially to that class of looms used for weaving wire in making wire cloth, the reeds embodying the present invention being of especial value as applied in such looms, although they may be used in other classes of looms.

In wire looms the dents must be arranged so that the warp wires are positively guided on opposite sides, and lateral play of the wires prevented, while at the same time it is important that all irregularities in the wires caused by knots, bends, &c., shall not catch in the dents, as would be the case if the two guiding surfaces for the opposite sides of a wire were placed directly opposite each other and so close together as to furnish the desired positive guide of the wire. In weaving wide mesh fabric, moreover, and especially in large wire work where the wire to be beaten up is heavy, the beating up surfaces at the front of the reed must be quite close together to secure the proper beating up of the weft. These results are secured in accordance with the present invention by using dents having guiding portions equal in width to the distance between two wires, so that the opposite sides of each dent shall form guiding surfaces for two adjacent wires, and arranging the guiding portions of these dents alternately at the front and rear of the reed, and at a sufficient distance apart longitudinally of the warp to provide space for the easy passage of irregularities, and by providing beating up surfaces at the front of the reed between the guiding portions of the dents. The dents may be of various forms and secure many of the advantages resulting from the invention, but it will be found preferable to make the dents with curved guiding surfaces which enable the reed to swing more readily over the wires, and prevent the catch of the dents upon knots therein, and in the construction which is found preferable on account of cheapness of manufacture and durability, the guiding surfaces are oval and a very simple and efficient combination, giving full access to the light so as to be conveniently threaded up, may be formed by using simple oval bars of a shorter diameter equal to the distance between adjacent wires to provide the guiding surfaces and smaller bars separate therefrom for the additional beating up surfaces. The additional beating up surfaces may be used only on one side of the reed, or if a reversible dent be desired, they may be provided at each side so that either side may be the front or rear of the reed.

In the accompanying drawings forming a part of this specification there are shown for the purpose of illustration constructions embodying the invention in the preferred form, and a detailed description of the same will now be given, and the features forming the invention specifically pointed out in the claims.

In the drawings:—Figure 1 is a side view of a portion of the reed. Fig. 2 is an enlarged cross section on the line 2 of Fig. 1. Fig. 3 is a view similar to Fig. 2 showing a modified construction having additional beating up surfaces on but one side.

Referring now especially to Figs. 1 and 2, A is the reed frame; B, the dents, and C the wires. The dents B, as shown, are formed of simple oval bars equal in diameter to the distance between two adjacent wires, and placed alternately at the front and rear of the reed, so that the opposite sides of each dent form guiding surfaces for two wires, and the wires while positively guided against lateral play have a freedom of movement between the dents to permit the passage of irregularities. The oval bars shown are preferable to round bars as they provide more extended guiding surfaces, thus increasing their durability, and strengthen the bars in the direction in which the beating up pressure is exerted.

Additional beating up surfaces within the considerable space left between the dents are provided in the construction shown in Figs. 1 and 2 by inserting between each two dents at both sides of the reed a bar D set so that its front surface is in line with the front surfaces of the dents.

It is obvious that the bars D are required only at the front of the reed, but in these figures a row is shown at both front and rear making a reed which will operate with the same effect when reversed.

It will be obvious that modifications may be made in the construction of the reed without departing from the invention, and I am not to be limited to the exact form of the construction shown.

What is claimed is—

1. A loom reed having dents, the guiding portions of which are equal in thickness to the distance between adjacent warp strands, said guiding portions being placed alternately at the front and rear of the reed, and said reed having beating up surfaces at the front of the reed between the dents, substantially as described.

2. A loom reed having dents formed of bars, the guiding portions of which are equal in diameter to the distance between adjacent warp strands, said guiding portions being placed alternately at the front and rear of the reed, and smaller beating up bars between the dents, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

WM. ORR.

Witnesses:
C. J. SAWYER,
T. F. KEHOE.